

CLAIMS

We Claim:

1. A process for polymerizing olefin(s) in the presence of a polymerization catalyst and a thermally triggered compound in a reactor at an operating temperature, wherein the thermally triggered compound chemically transforms at a temperature above the operating temperature to form one or more catalyst inhibitors that reduce the effectiveness of the polymerization catalyst to polymerize olefin(s).
2. The process of claim 1 wherein the thermally triggered compound chemically transforms at a temperature greater than the polymerization temperature.
3. The process of claim 1 wherein one of the catalyst inhibitors comprises carbon dioxide.
4. The process of claim 1 wherein the polymerization catalyst is supported.
5. The process of claim 1 wherein the polymerization catalyst comprises a bulky ligand metallocene catalyst compound.
6. The process of claim 1 wherein the thermally triggered compound is introduced with the polymerization catalyst.
7. The process of claim 1 wherein the thermally triggered compound chemically transforms into two catalyst inhibitors.
8. The process of claim 7 wherein the two catalyst inhibitors comprise a gas and a liquid.
9. The process of claim 1 wherein the thermally triggered compound has a weight loss greater than 5 weight percent at 100 °C and less than 0.02 weight percent at 80 °C as measured using thermogravimetric analysis at 80°C for 20 minutes and 100 °C for 20 minutes.
10. In a process for polymerizing one or more olefins in the presence of a catalyst composition in a reactor operating at a polymerization temperature and a polymerization pressure to produce a polymer product, the process comprising

thermally triggered compound compound that chemically transforms into at at least two catalyst inhibitors at a temperature above the polymerization temperature.

11. The process of claim 10 wherein the polymerization temperature is in the range of from 65°C to 110°C.
12. The process of claim 10 wherein one of the catalyst inhibitors comprises carbon dioxide.